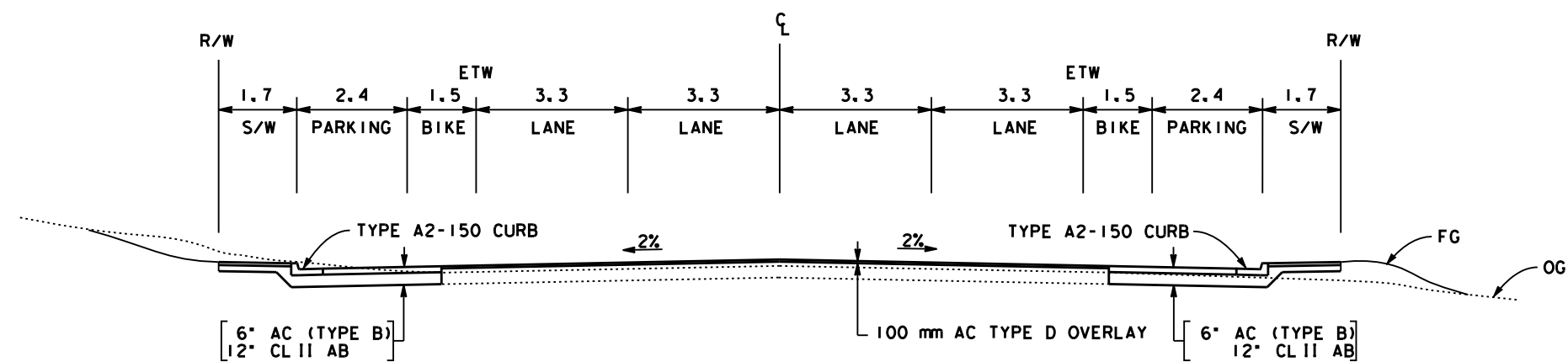


ALT 3 - SR 28 TURN LANE AREAS AND NO PARKING

STA 146+87 TO 148+75



ALT 3 - SR 28 SR 267 TO CHIPMUNK

STA 146+87 TO 162+45

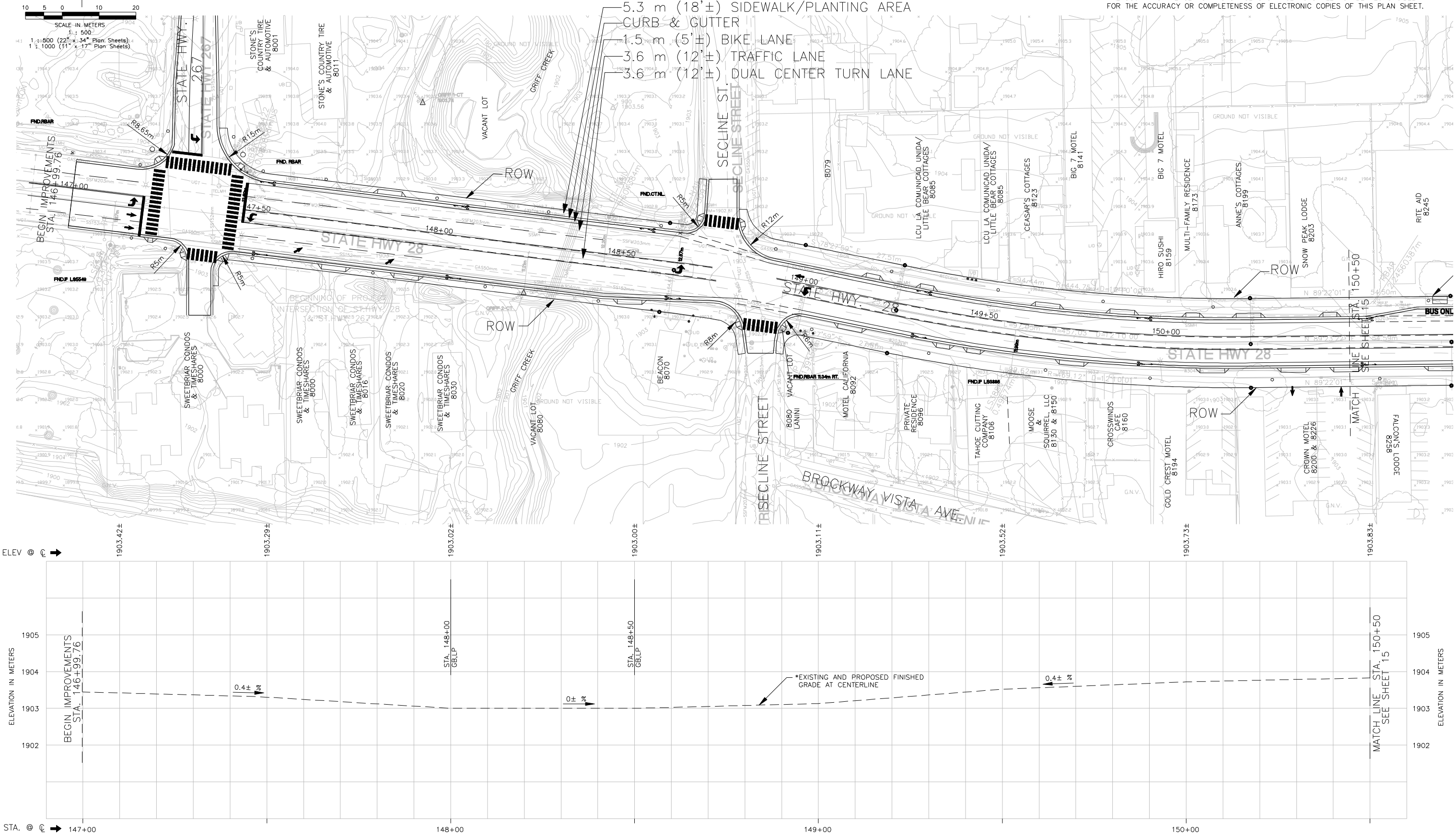
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 - 1 - 3.6 m (12') DUAL CENTER TURN LANE
 - 1 - 1.5 m (5') BIKE LANE EACH DIRECTION
 - 1 - 5.3 m (18±) SIDEWALK/PLANTING AREA EACH DIRECTION
- (SEE SHEET 18 FOR TYPICAL X-SECTION - ALTERNATIVE 4)



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DEPARTMENT OF PUBLIC WORKS

COUNTY OF PLACER

KINGS BEACH COMMERCIAL CORE IMPROVEMENT PROJECT

FEASIBILITY STUDY - ALTERNATIVE 4 - PLAN, PROFILE & STRIPING LAYOUT

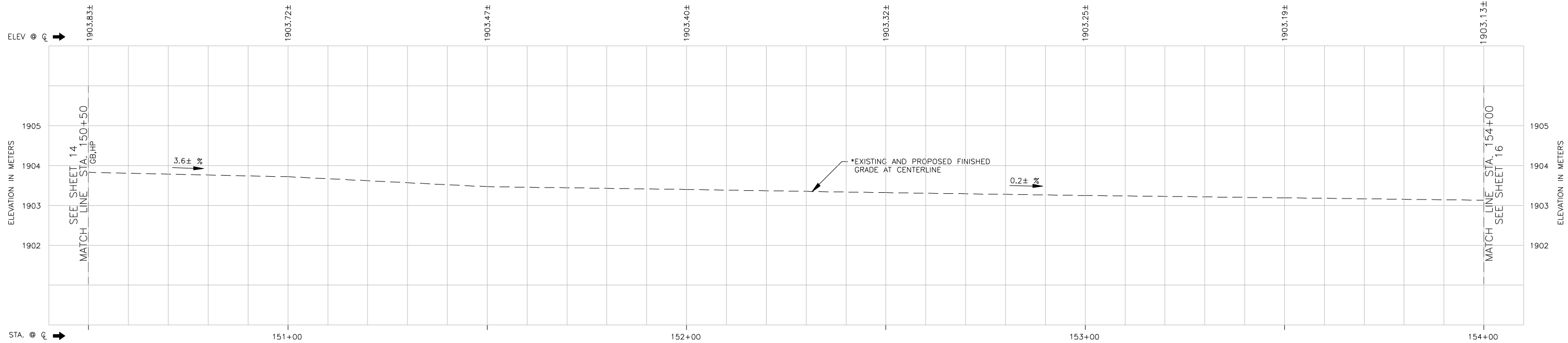
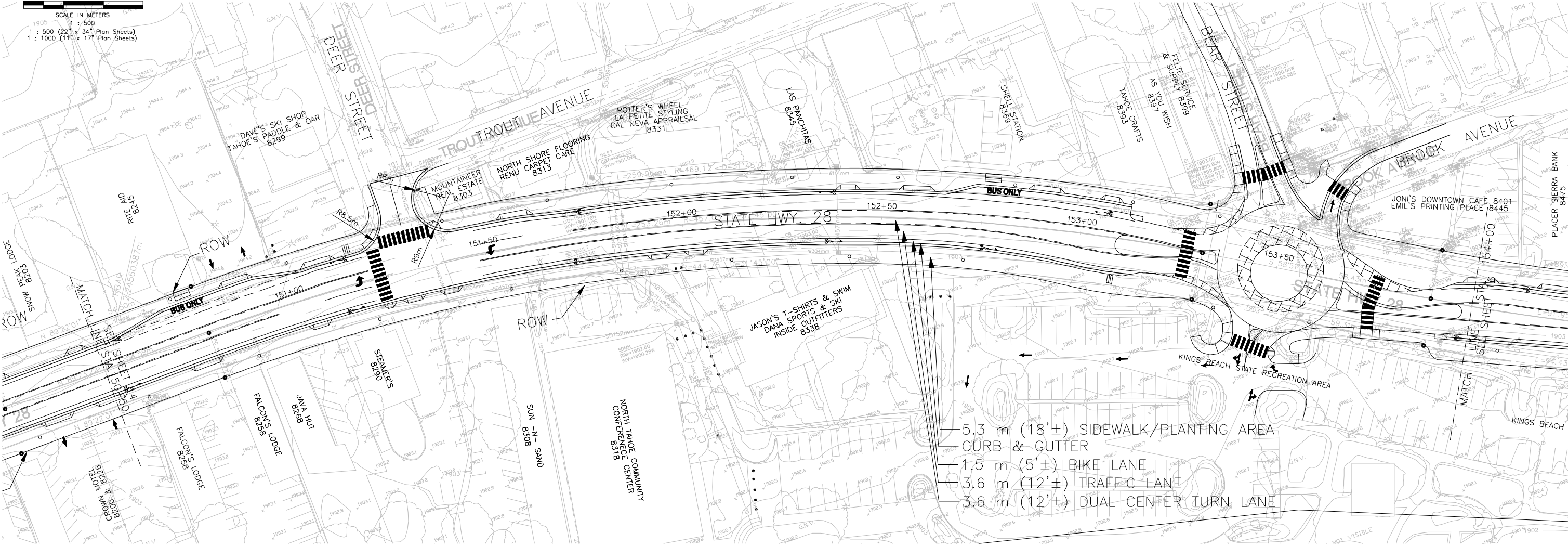
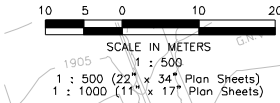
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KINGS BEACH COMMERCIAL CORE IMPROVEMENT PROJECT

FEASIBILITY STUDY - ALTERNATIVE 4 - PLAN, PROFILE & STRIPING LAYOUT

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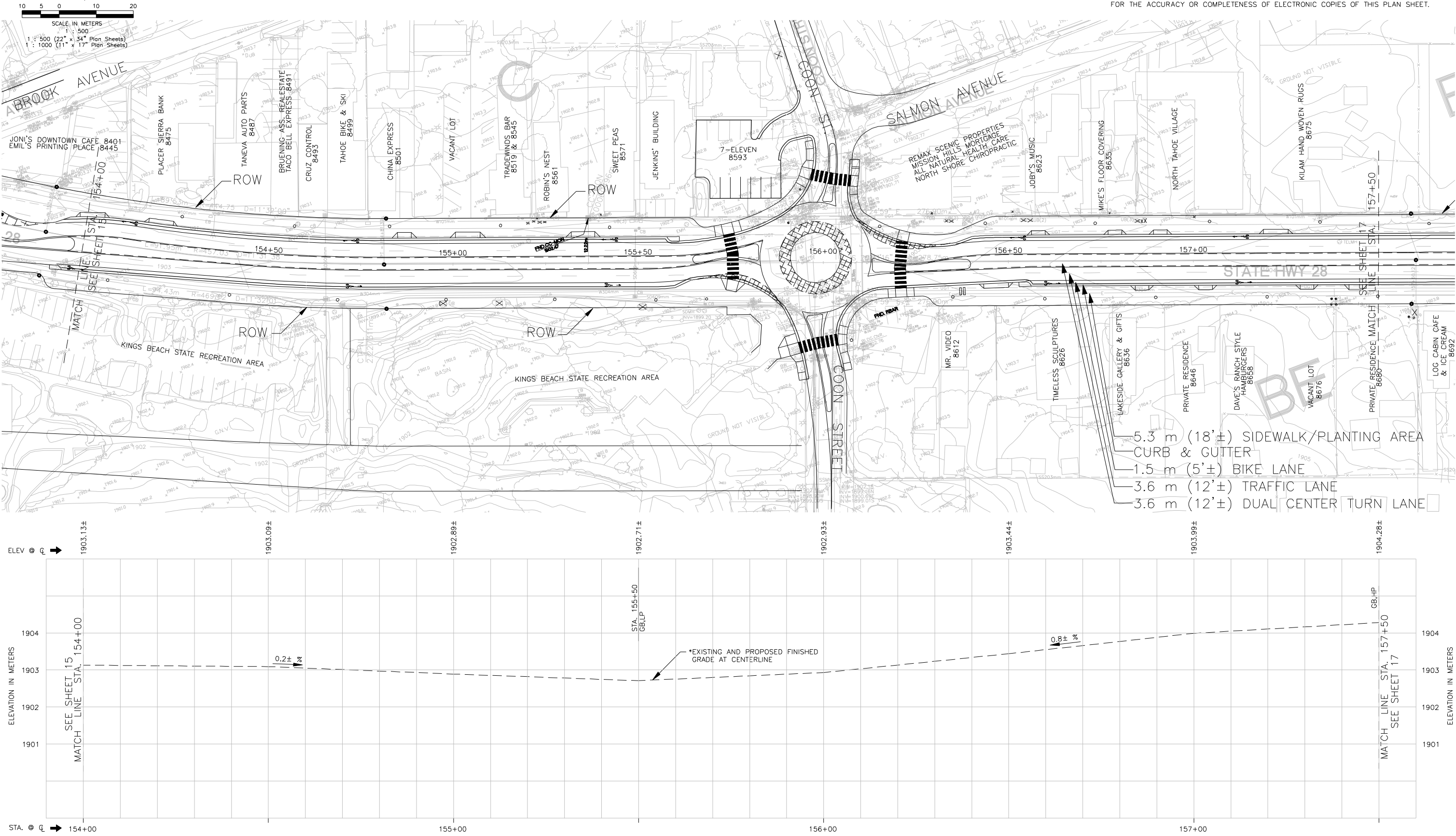
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1 - 1.5 m (5') BIKE LANE EACH DIRECTION
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(SEE SHEET 18 FOR TYPICAL X-SECTION - ALTERNATIVE 4)



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KINGS BEACH COMMERCIAL CORE IMPROVEMENT PROJECT
FEASIBILITY STUDY - ALTERNATIVE 4 - PLAN, PROFILE & STRIPING LAYOUT

COUNTY OF PLACER

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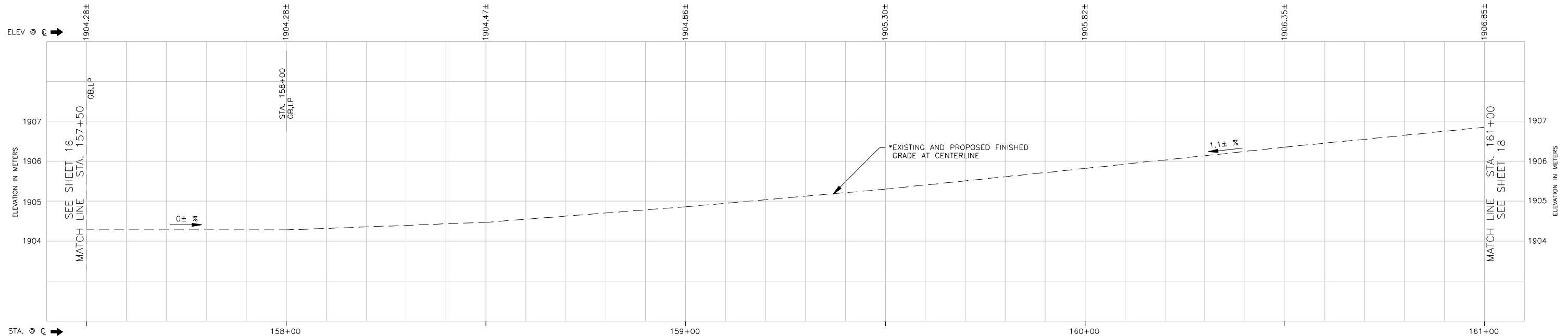
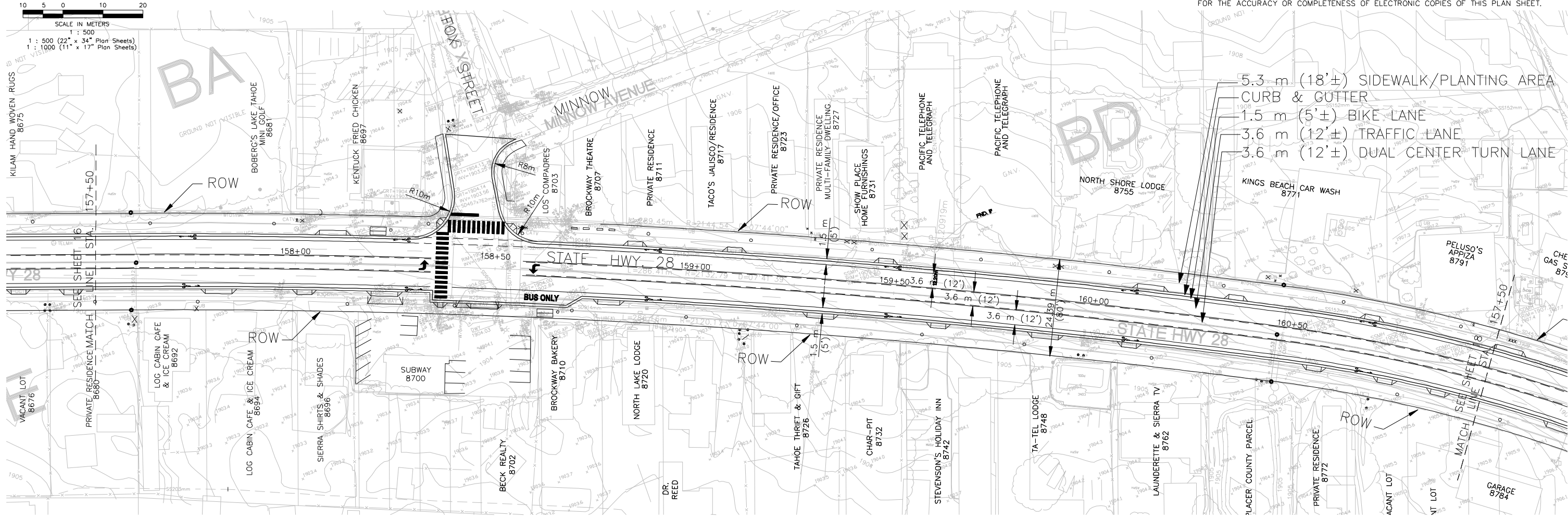
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COUNTY OF PLACER
KINGS BEACH COMMERCIAL CORE IMPROVEMENT PROJECT
FEASIBILITY STUDY - ALTERNATIVE 4 - PLAN, PROFILE & STRIPING LAYOUT

SHEET NO. 16 OF 18

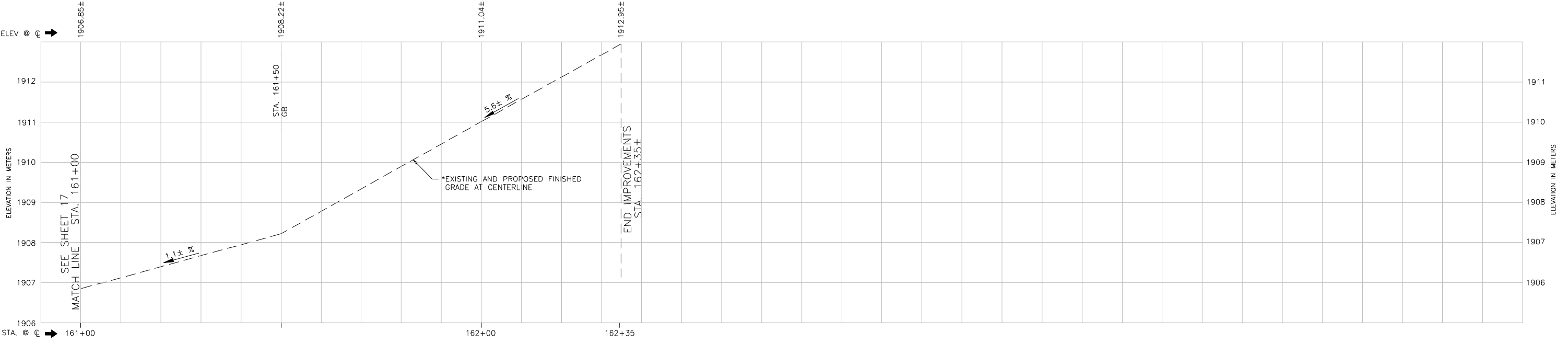
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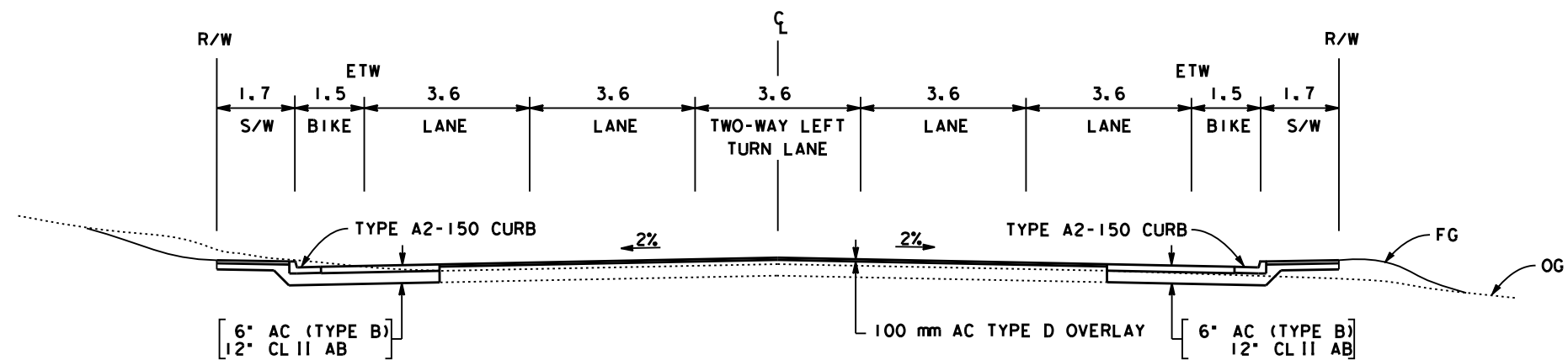
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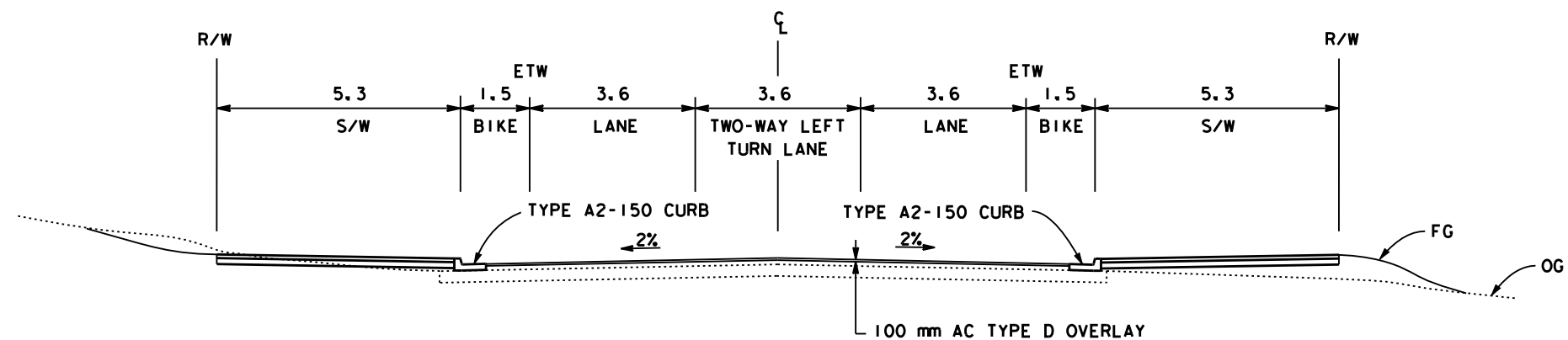
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COUNTY OF PLACER
KINGS BEACH COMMERCIAL CORE IMPROVEMENT PROJECT
FEASIBILITY STUDY - ALTERNATIVE 4 - PLAN, PROFILE & STRIPING LAYOUT



ALT 4 - SR 28
SR 267 TO SECLINE

STA 146+87 TO 148+75



ALT 4 - SR 28
SECLINE TO CHIPMUNK

STA 148+75 TO 162+45

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COUNTY OF PLACER
KINGS BEACH COMMERCIAL CORE IMPROVEMENT PROJECT
FEASIBILITY STUDY - ALTERNATIVE 4 - TYPICAL SECTIONS
SHEET NO. 18 OF 18

The following alternatives are evaluated.

2.3.1 Alternative 1 (No Build)

The existing roadway configuration would be unchanged. Because there are no improvements under this alternative, there would be no improvements to water quality, aesthetics, or other resource areas.

2.3.2 Alternative 2: Two Lanes with On-Street Parking and Two Roundabouts

Under Alternative 2, SR-28 would be modified from a four-lane cross section roadway to a three-lane cross section roadway. Alternative 2 also proposes single-lane roundabouts at Bear and Coon Streets, as a roundabout would operate better than a signalized intersection with a 3-lane cross section. When properly designed, a roundabout can move traffic efficiently through an intersection without a traffic signal (because the roundabout's circular traffic is always moving), reduce accidents compared with other types of intersection controls, and provide an opportunity for landscaping. To accommodate the roundabouts, travel lanes would be reduced to one 3.6-meter (12.0-foot) lane in each direction with a continuous 3.6-meter (12.0-foot) two-way left-turn lane. Parallel parking and designated bike lanes would be provided on both sides of the roadway, and 2.9-meter (9.5-foot) pedestrian sidewalks with landscaped amenities would be provided on each side. Enhanced and clearly marked pedestrian crossings at the SR 267, Deer, Bear, Coon, Fox, and Chipmunk intersections (with a signal at the SR 267 intersection) would be included as part of this alternative. The SR 28 signalized intersection with SR 267 would be maintained with four lanes and turn pockets. A transition from four lanes to two lanes would occur on SR 28 between SR 267 and Secline Street. A two-way left-turn lane would be provided and parallel parking prohibited within this section of SR 28. Sidewalks would be 1.7 meters (5.5 feet) wide on each side of SR 28. The standard two-lane section with two-way left-turn lane would begin east of Secline Street. Bike lanes, sidewalks, and parallel parking would be provided eastward to Chipmunk Street. Parallel parking would be prohibited at

driveways and bus turnouts and within intersection sight lines. A 2.4-meter (8.0-foot) parking lane would be created in each direction, and on-street parking would be prohibited during the peak summer season from Independence Day to Labor Day. Restrictions would be accomplished by signage, temporary barricades, and enforcement. The on-street parking loss would be compensated by the newly created off-site parking spaces proposed as part of the proposed action.

Alternative 2 would include the following elements:

- Pedestrian markings;
- Single 3.6-meter (12.0-foot) traffic lane in each direction;
- Single 3.6-meter (12.0-foot) dual-access center turn lane;
- 2.9-meter (9.5-foot) sidewalk and landscape area in each direction;
- 1.5-meter (5.0-foot) bike lane on each side;
- 2.4-meter (8.0-foot) parking lane in each direction, with on-street parking prohibited during the peak summer season from Independence Day to Labor Day;
- Off-street parking on side streets and in new parking lots (parking effects and parking compensation for each alternative are described in *Section 3.7*); and
- Roundabouts at intersections with Bear and Coon Streets.

Alternative 2 would also have the option of reducing the sidewalk width on both sides by 0.6 meter (2.0 feet). This 0.6 meter (2.0 feet) would be added to the parking and bike lane width throughout the action area. This option would be constructed to reduce the effect of on-street parking on through traffic.

The Alternative 2 Option would result in the following changes to Alternative 2:

- 2.3-meter (7.5-foot) sidewalk and landscape area in each direction;
- 2.7-meter (9.0-foot) parking lane in each direction; and

- 1.8-meter (6.0-foot) bike lane in each direction.

2.3.3 Alternative 3: Four Lanes with On-Street Parking

Alternative 3 includes improvements to pedestrian and bicycle access, bus stops, and parking. Under Alternative 3, SR 28 would remain a four-lane cross-section roadway with two 3.3-meter (11-foot) east/west traffic lanes until just east of the Fox Street intersection. Between the Fox Street and Chipmunk Street intersections, SR 28 would become a three-lane roadway, with one traffic lane in each direction and a two-way left-turn lane. Traffic signals would be installed at Bear Street and modified at SR 267 and Coon Street. Left-turn lanes, which are based upon traffic volumes, would be provided at SR 267, Bear Street, Fox Street, Coon Street, Chipmunk Street, and Secline Street. A 1.5-meter (5-foot) bike lane and 2.4-meter (8-foot) parking lane would be created in each direction. Along the roadway, a 1.7-meter (5.6-foot) sidewalk would be installed on both sides of SR 28. Enhanced and clearly marked pedestrian crossings at the SR 267, Deer, Bear, Coon, Fox, and Chipmunk intersections (with signals at the SR 267, Bear, and Coon intersections) would also be included as part of this alternative. The narrow ROW width of 24.4 meters (80.1 feet) would restrict the travel lanes to 3.3 meters (11 feet) and the sidewalks to 1.7 meters (5.6 feet) on each side.

Alternative 3 would include the following components:

- Two 3.3-meter (11-foot) traffic lanes in each direction;
- Traffic signals at SR 267, Bear Street, and Coon Street;
- Left-turn lanes at SR 267, Bear Street, Fox Street, Coon Street, Chipmunk Street, and Secline Street;
- A 1.5-meter (5-foot) bike lane in each direction;
- A 2.4-meter (8-foot) parking lane in each direction, as in Alternative 2;
- A 1.7-meter (5.6-foot) sidewalk in each direction;
- Off-street parking on side streets and in new parking lots; and

- Pedestrian crossings at SR 267, Secline Street, Deer Street, Bear Street, Coon Street, Fox Street, and Chipmunk Street. Only crossings at SR 267, Bear, and Coon would be controlled with signals.

2.3.4 Alternative 4: Three Lanes with Two Roundabouts and Without On-Street Parking

Alternative 4 is similar to Alternative 2 in that SR 28 would be modified from a four-lane cross-section roadway to a three-lane cross-section roadway. The significant difference is that parallel parking is not provided along the entire length of the action area. The loss of on-street parking on SR 28 would be offset through side-street parking and newly constructed parking lots to mitigate this loss. One 3.6-meter (12-foot) east/west traffic lane and a two-way left-turn lane of the same width would be provided. Along the roadway, a single 1.5-meter (5.0-foot) bike lane would be created in each direction; however, on-street parking would not be included in this alternative. The width saved from parking spaces is incorporated into the sidewalks and landscaped planting area, making them 5.3 meters (17.4 feet) wide on each side. Bus stop turnouts are provided under Alternative 4, and at these locations the sidewalk narrows to 2.9 meters (9.5 feet). Two roundabouts would be created at the SR 28 intersections with Bear and Coon Streets. Enhanced and clearly marked pedestrian crossings at the SR 267, Deer, Bear, Coon, Fox, and Chipmunk intersections (with signals at the SR 267 intersection) would also be included.

Alternative 4 would include the following components:

- Single 3.6-meter (12.0-foot) traffic lane in each direction;
- Single 3.6-meter (12.0-foot) dual-access center turn lane;
- No on-street parking on SR 28;
- Off-street parking on side streets and in new parking lots;
- A 1.5-meter (5.0-foot) bike lane in each direction;

- A 5.3-meter (17.4-foot) sidewalk landscape area in each direction;
- Roundabouts at the SR 28 intersections with Bear and Coon Streets; and
- Pedestrian crossings at SR 267, Secline Street, Deer Street, Bear Street, Coon Street, Fox Street, and Chipmunk Street. Only the crossing at SR 267 would be controlled with a signal.

Under all alternatives (except Alternative 1), Brook Avenue between Bear to Coon Streets would be converted to one-way eastbound, providing the opportunity for additional on-street parking. Alternative 3 is the only alternative that has a nonstandard design feature—3.3-meter (11.0-foot) lanes. Alternatives 2 and 4 do not have any nonstandard design features.

Under all build alternatives, ROW would be acquired in various locations adjacent to SR 28 and near affected intersections. The ROW would be acquired in compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended.

2.4 Features Common to all Alternatives

2.4.1 Pedestrian and Bicycle Mobility

Features implemented as part of the proposed action that will serve to enhance and facilitate pedestrian and bicycle mobility through the action area include sidewalks and Class II bike lanes along both sides of SR 28 through the commercial core area, as well as signals, roundabouts, and enhanced and clearly marked pedestrian crossings. The sidewalks and bike lanes will allow pedestrians and bicyclists to easily navigate through the action area while signals, roundabouts, and enhanced and clearly marked pedestrian crossings will provide a substantially improved pedestrian crossing opportunity of SR 28.

2.4.2 Water Quality Improvements

Water quality improvements associated with the proposed action include the construction of new collection and conveyance infrastructure (including, but are not limited to,

sedimentation basins, swales, sediment traps, box culverts, infiltration basins, new roadway curbs and gutters, storm drains, ditches, man-made channels, collection/detention basins, and other conveyance infrastructure) leading to the water treatment and conveyance facilities identified in the proposed Kings Beach Watershed Improvement Project (WIP). Appendix B contains the *Kings Beach Watershed Improvement Project Final Watershed Improvement Plan Memorandum* (Entrix 2006a), which details the planning process for the proposed WIP. Figure 2-2 indicates the water quality improvements associated with the proposed WIP, in addition to the improvements that will be implemented as part of the CCIP. The water quality improvements associated with the CCIP are located within the brown boundary on Figure 2-2. Water quality elements that will be installed include, but are not limited to, the following items:

- Constructing grass-lined swales where they can be supported to convey runoff along the ROW and promote infiltration;
- Constructing rock lined channels to convey water along the ROW and promote infiltration;
- Installing basins to collect and retain runoff;
- Constructing infiltration galleries to retain runoff; and
- Installing media filters, or advanced treatment technologies, to treat runoff from KBCC and Brockway Vista Avenue. (Entrix 2006a.)

On the streets upstream of SR 28, curbs and gutters will be installed as best management practices (BMP) to help collect and direct runoff from the potential on-street parking sites (Figure 2-3), as well as runoff flowing into the CCIP from areas upstream of the CCIP. These improvements would serve to mitigate increased runoff due to the creation of new hard coverage from the parking lots. Currently, there are no collection and conveyance features on these upstream streets to adequately direct the upstream runoff through the CCIP area; instead, the runoff flows directly through the CCIP and into Lake Tahoe. With the installation of the curbs and gutters as part of the CCIP, this runoff will be



Source: Dokken Engineering

Figure 2-3
Kings Beach Commercial Core Improvement Project
Potential Parking Sites

directed to collection basins, vaults, and media filters that will be upgraded and installed as part of the CCIP (Figure 2-2), and water would not flow untreated into Lake Tahoe, as under current conditions. In addition, improvements associated with the proposed WIP will further increase water treatment capacity.

At the potential off-site parking lots (Figure 2-3), no culverting or conveyance improvements would be constructed to direct runoff from these lots off site. Instead, runoff would be entirely contained onsite with the incorporation of BMPs (i.e., underground infiltration beds) into the parking lot design. The off-site parking lots would be designed to maintain runoff from a 20-year, 1-hour storm flow entirely on-site, while erosion control measures to protect water quality would also be incorporated into the design. The water collection and infiltration features incorporated into the off-site parking lots are designed to mitigate runoff associated with the additional hard coverage from the parking lots. And, because water would be contained entirely onsite, the off-site lots would not worsen water quality in the region.

Along SR 28, curbs and gutters will be installed to help direct runoff through the CCIP, while storm drain inlets and interceptors will be constructed to direct collected runoff to the collection basins, vaults, and media filters that will be upgraded and installed as part of the CCIP. The proposed vaults and media filters located outside the brown boundary on Figure 2-2 are not associated with the CCIP. Instead, they are considered water quality improvements that will be implemented as part of the proposed WIP, which will further increase water treatment capacity. Vaults and media filters installed beneath Placer County roads (Coon Street and Secline Street/Brockway Vista Avenue) will be located entirely within the roadway ROW. Construction activities, including equipment staging and parking must occur entirely within the ROW, and no temporary construction easements will be obtained to allow construction activities/staging outside of the ROW. In addition, the vault and media filter proposed at Secline Street may be moved to Brockway Vista Avenue if conditions prohibit the placement of the facility at Secline Street.